IEEE P802.11
Wireless LANs

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| Resolutions for Clause 4.3.100 |
| Date: 2021-01-11 |
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Abstract

This document describes the resolutions for clause 4.3.100 on LB252.

# Overview of comments

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| **CID** | **Page** | **Line** | **Clause** | **Comment** | **Proposed Change** |
| 1166 | 14.00 | 1 | 4.3.100 | This does not provide any information:" Enhanced Broadcast Service (eBCS) enables efficient local distribution of information." | Delete the cited text |
| 1248 | 14.00 | 1 | 4.3.100 | There are several issues with this subclause. 1) 802.11-2020 enables efficient local distribution of information too. 2) "enhanced" w.r.t. what? 3) Not clear if txer and rxers have to be in same ESS or even if rxers have to be 802.11 STAs. 4) origin authenticity is not privacy | See other comments for proposed changes for 2), 3), 4). For 1) delete the first sentence of the subclause |
| 1468 | 14.00 | 2 | 4.3.100 | An infrastructure BSS only exists for associated STAs. Therefore the 2nd sentence needs re-writing. | Change the 2nd sentence to:"eBCS provides enhanced transmission and reception of broadcast data, both where there is an association between the transmitter and the receiver(s) in an infrastructure BSS and in cases where there is no association between the transmitter(s) and receiver(s) STAs." |
| 1542 | 14.00 | 3 | 4.3.100 | "..., both where there is an association between the transmitter and the receiver(s) and in cases where there is no association between transmitter(s) and receiver(s)." There should be no multiple transmitters. And can't we just assume multiple receivers for broadcast data for simplicity (even though there might be only one receiver in some cases)? Suggest to change as follows: "..., both where there is an association between a transmitter and receivers and in cases where there is no association between a transmitter and receivers." | As in comment. |
| 1435 | 14.00 | 5 | 4.3.100 | What is "Forwarding Servises" | Define Forward Service |
| 1230 | 14.00 | 6 | 4.3.100 | Replace "UL (uplink)" with "uplink (UL)" as the abbreviation is placed after the full definition. | Replace "UL (uplink)" with "uplink (UL)". |
| 1055 | 14.00 | 6 | 4.3.100 | The explanation of eBCS includes the phrase "Further, eBCS APs can provide forwarding service in which the eBCS AP forwards the contents carried in an UL (uplink) eBCS frame to a remote destination specified in the frame." In my understanding this is exactly what every AP is doing in general with UL traffic. It must be changed to something more specific regarding the eBCS service. | Change to "Further, eBCS APs can provide forwarding with embedding service in which the eBCS AP forwards the contents carried in an UL (uplink) eBCS frame to a remote destination specified in the frame after embedding some information on it" |
| 1436 | 14.00 | 6 | 4.3.100 | What is a "Remote Destination" | Define Remote Destination |
| 1400 | 14.00 | 6 | 4.3.100 | The wording "contents carried in" is not very precise. | Change "the contents carried in" to "the contents transmitted in the payload of" |
| 1167 | 14.00 | 7 | 4.3.100 | This operation is not clear:"The UL eBCS frame is broadcasted by an eBCS non-AP STA without solicitation from the eBCS AP." Does this mean that non-AP STA can send broadcast frames. Please clarify. So far non-AP STAs have not transmitted broadcast data. | Clarify the service where non-AP STA may send boadcast traffic. This operation seems quite far from normal use cases in IEEE. I am not sure is this new service needed. |
| 1249 | 14.00 | 7 | 4.3.100 | Well, it's generally the case that UL traffic is unsolicited; the cases where it's solicited are the exception rather than the rule. Also "broadcasted" is not valid English | Delete "The UL eBCS frame is broadcasted by an eBCS non-AP STA without solicitation from the eBCS AP." |
| 1472 | 14.00 | 9 | 4.3.100 | The sentence states "provides additional means", but I don't know of any current means of protecting broadcast traffic, so this sentence needs to be re-written to explain what "additional" is referring to. | Change the initial part of the sentence from "eBCS provides additional means for protecting broadcast traffic..."to"eBCS provides means for protecting broadcast traffic..." |
| 1469 | 14.00 | 9 | 4.3.100 | Regarding this sentence "eBCS provides additional means for protecting broadcast traffic", protection is only provided when there is a security relationship between an AP and a non-AP STA. | Add to the start of the 1st sentence to "When there is an association, " |
| 1056 | 14.00 | 10 | 4.3.100 | The text "including protection of origin authenticity" I think it is not correct. To me this is protecting the authentity of the origin which is not what we do. | I think it should read "including authentication of origin" or "including origin authentication". |
| 1168 | 14.00 | 12 | 4.3.100 | Typically service main operations are not listed as in rows 12 -15. | Delete the lines 12 - 15 .They are not needed. |
| 1251 | 14.00 | 12 | 4.3.100 | There are lots of other features in EBCS, e.g. EBCS security features. In addition. the features listed here are extremely broad and anodyne | Delete lines 12-15 |
| 1057 | 14.00 | 12 | 4.3.100 | missing all the security features in the list of features provided | Add service advertisement, origin authentication |
| 1543 | 14.00 | 15 | 4.3.100 | "registration and deregistration" Isn't it better say "setup and teardown" or "negotiation and termination"? | As in comment. |

# Discussion of comments

1. **“Enhanced Broadcast Service (eBCS) enables efficient local distribution of information.”**

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| 1166 | 14.00 | 1 | 4.3.100 | This does not provide any information:" Enhanced Broadcast Service (eBCS) enables efficient local distribution of information." | Delete the cited text | Accept. |
| 1248 | 14.00 | 1 | 4.3.100 | There are several issues with this subclause. 1) 802.11-2020 enables efficient local distribution of information too. 2) "enhanced" w.r.t. what? 3) Not clear if txer and rxers have to be in same ESS or even if rxers have to be 802.11 STAs. 4) origin authenticity is not privacy | See other comments for proposed changes for 2), 3), 4). For 1) delete the first sentence of the subclause | Revised.1. The first sentence of the subclause is deleted.
2. “enhanced” is deleted.
3. Modified to specify that the receivers are 802.11 STAs as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>.
4. The text describes traffic protection and privacy. Origin authenticity is a part of traffic protection.
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* Delete the sentence.
1. **“eBCS provides enhanced transmission and reception of broadcast data in an infrastructure BSS, both where there is an association between the transmitter and the receiver(s) and in cases where there is no association between transmitter(s) and receiver(s).”**

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| --- | --- | --- | --- | --- | --- | --- |
| 1468 | 14.00 | 2 | 4.3.100 | An infrastructure BSS only exists for associated STAs. Therefore the 2nd sentence needs re-writing. | Change the 2nd sentence to:"eBCS provides enhanced transmission and reception of broadcast data, both where there is an association between the transmitter and the receiver(s) in an infrastructure BSS and in cases where there is no association between the transmitter(s) and receiver(s) STAs." | Revised.The comment is correct.Modified as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>. |
| 1542 | 14.00 | 3 | 4.3.100 | "..., both where there is an association between the transmitter and the receiver(s) and in cases where there is no association between transmitter(s) and receiver(s)." There should be no multiple transmitters. And can't we just assume multiple receivers for broadcast data for simplicity (even though there might be only one receiver in some cases)? Suggest to change as follows: "..., both where there is an association between a transmitter and receivers and in cases where there is no association between a transmitter and receivers." | As in comment. | Revised.“transmitter(s)” and “receiver(s)” are replaced with “transmitter” and “receiver” respectively as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>. |

* Change to

“EBCS provides transmission and reception of broadcast data, both where there is an association between the transmitter and the receiver(s) in an infrastructure BSS and in cases where there is no association between the transmitter and receiver(s) STAs.”

1. **“Further, eBCS APs can provide forwarding service in which the eBCS AP forwards the contents carried in an UL (uplink) eBCS frame to a remote destination specified in the frame.”**

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| 1435 | 14.00 | 5 | 4.3.100 | What is "Forwarding Servises" | Define Forward Service | Revised.“Forwarding Services” is deleted as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>. |
| 1230 | 14.00 | 6 | 4.3.100 | Replace "UL (uplink)" with "uplink (UL)" as the abbreviation is placed after the full definition. | Replace "UL (uplink)" with "uplink (UL)". | Revised.“UL (uplink)” is replaced with “UL” as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>.This is a name of frame. |
| 1055 | 14.00 | 6 | 4.3.100 | The explanation of eBCS includes the phrase "Further, eBCS APs can provide forwarding service in which the eBCS AP forwards the contents carried in an UL (uplink) eBCS frame to a remote destination specified in the frame." In my understanding this is exactly what every AP is doing in general with UL traffic. It must be changed to something more specific regarding the eBCS service. | Change to "Further, eBCS APs can provide forwarding with embedding service in which the eBCS AP forwards the contents carried in an UL (uplink) eBCS frame to a remote destination specified in the frame after embedding some information on it" | Reject.Embedding is described in later sentence. |
| 1436 | 14.00 | 6 | 4.3.100 | What is a "Remote Destination" | Define Remote Destination | Reject.“Remote Destination” is defined in clause 3.2. |
| 1400 | 14.00 | 6 | 4.3.100 | The wording "contents carried in" is not very precise. | Change "the contents carried in" to "the contents transmitted in the payload of" | Revised.“the contents carried in” is replaced with “the contents carried in the payload of” as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>. |

* Change to

“Further, EBCS AP can forward the contents carried in the payload of an EBCS UL frame that is transmitted by an EBCS non-AP STA, to a remote destination specified in the frame.”

1. **“The UL eBCS frame is broadcasted by an eBCS non-AP STA without solicitation from the eBCS AP.”**

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| --- | --- | --- | --- | --- | --- | --- |
| 1167 | 14.00 | 7 | 4.3.100 | This operation is not clear:"The UL eBCS frame is broadcasted by an eBCS non-AP STA without solicitation from the eBCS AP." Does this mean that non-AP STA can send broadcast frames. Please clarify. So far non-AP STAs have not transmitted broadcast data. | Clarify the service where non-AP STA may send boadcast traffic. This operation seems quite far from normal use cases in IEEE. I am not sure is this new service needed. | Revised.The sentence is deleted and add “that is transmitted by an EBCS non-AP STA” to the previous sentence as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>. |
| 1249 | 14.00 | 7 | 4.3.100 | Well, it's generally the case that UL traffic is unsolicited; the cases where it's solicited are the exception rather than the rule. Also "broadcasted" is not valid English | Delete "The UL eBCS frame is broadcasted by an eBCS non-AP STA without solicitation from the eBCS AP." | Revised.The sentence is deleted and add “that is transmitted by an EBCS non-AP STA” to the previous sentence as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>. |

* Delete the Sentence.

Add “that is transmitted by an EBCS non-AP STA” to the previous sentence.

1. **“The forwarding eBCS AP embeds metadata, if supported by the AP, when requested by the transmitting STA.”**

No comments.

1. **“eBCS provides additional means for protecting broadcast traffic and the privacy of the stations receiving that traffic, including protection of origin authenticity between STAs that use a group temporal key security association (GTKSA) for broadcast transmissions.”**

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| --- | --- | --- | --- | --- | --- | --- |
| 1472 | 14.00 | 9 | 4.3.100 | The sentence states "provides additional means", but I don't know of any current means of protecting broadcast traffic, so this sentence needs to be re-written to explain what "additional" is referring to. | Change the initial part of the sentence from "eBCS provides additional means for protecting broadcast traffic..."to"eBCS provides means for protecting broadcast traffic..." | Accept. |
| 1469 | 14.00 | 9 | 4.3.100 | Regarding this sentence "eBCS provides additional means for protecting broadcast traffic", protection is only provided when there is a security relationship between an AP and a non-AP STA. | Add to the start of the 1st sentence to "When there is an association, " | Revised.“When there is an association,” is added at the start of the sentence.Description for no association case is added as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>. |
| 1056 | 14.00 | 10 | 4.3.100 | The text "including protection of origin authenticity" I think it is not correct. To me this is protecting the authentity of the origin which is not what we do. | I think it should read "including authentication of origin" or "including origin authentication". | Revised.“including protection of origin authenticity” is replaced with “including origin authentication” as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0042-00-00bc-resolutions-for-clause-4-3-100.docx>. |

* Change to

“When there is an association, EBCS provides means for protecting broadcast traffic and the privacy of the STAs receiving that traffic, including origin authentication between STAs that use a group temporal key security association (GTKSA) for broadcast transmissions. EBCS provides origin authentication for broadcast traffic between STAs even if there is no association.”

1. **“The main features of eBCS are the following:

- eBCS capability advertisements
- eBCS frames
- eBCS procedures, such as registration and deregistration”**

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| --- | --- | --- | --- | --- | --- | --- |
| 1168 | 14.00 | 12 | 4.3.100 | Typically service main operations are not listed as in rows 12 -15. | Delete the lines 12 - 15 .They are not needed. | Accept. |
| 1251 | 14.00 | 12 | 4.3.100 | There are lots of other features in EBCS, e.g. EBCS security features. In addition. the features listed here are extremely broad and anodyne | Delete lines 12-15 | Accept. |
| 1057 | 14.00 | 12 | 4.3.100 | missing all the security features in the list of features provided | Add service advertisement, origin authentication | Revised.The lines are deleted by CID1168 and 1251. |
| 1543 | 14.00 | 15 | 4.3.100 | "registration and deregistration" Isn't it better say "setup and teardown" or "negotiation and termination"? | As in comment. | Revised.The lines are deleted by CID1168 and 1251. |

* Delete these lines.

# Suggested resolution

**4.3.100 1 Enhanced Broadcast Service**

~~Enhanced Broadcast Service (eBCS) enables efficient local distribution of information.~~ [1166, 1248] ~~eBCS~~ EBCS provides ~~enhanced~~ [1248] transmission and reception of broadcast data ~~in an infrastructure BSS~~ [1468], both where there is an association between the transmitter and the receiver~~(s)~~ [1542] in an infrastructure BSS [1468] and in cases where there is no association between transmitter~~(s)~~ [1542] and receiver~~(s)~~ [1542]. Further, ~~eBCS APs can provide forwarding service in which the eBCS~~ EBCS AP can forward~~s~~ the contents carried in the payload of [1400] an ~~UL (uplink) eBCS~~ EBCS UL [1230] frame that is transmitted by an EBCS non-AP STA, [1167, 1249] to a remote destination specified in the frame. [1435] ~~The UL eBCS frame is broadcasted by an eBCS non-AP STA without solicitation from the eBCS AP.~~ [1167, 1249] The forwarding ~~eBCS~~ EBCS AP embeds metadata, if supported by the AP, when requested by the transmitting STA.

When there is an association, [1469] ~~eBCS~~ EBCS provides ~~additional~~ [1472] means for protecting broadcast traffic and the privacy of the ~~stations~~ STAs receiving that traffic, including ~~protection of~~ [1056] origin ~~authenticity~~ authentication [1056] between STAs that use a group temporal key security association (GTKSA) for broadcast transmissions. EBCS provides origin authentication for broadcast traffic between STAs and the privacy of the STAs receiving that traffic even if there is no association.

~~The main features of eBCS are the following:~~

~~- eBCS capability advertisements~~

~~- eBCS frames~~

~~- eBCS procedures, such as registration and deregistration~~

[1268, 1251, 1057, 1543]

**References:**